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INTRODUCTION.

This REVIEW treats generally the meteorological conditions of the United States and Canada for May, 1888, and is based upon the reports of regular and voluntary observers of both countries. Descriptions of the storms that occurred over the north Atlantic Ocean are also given, and their approximate paths shown on chart i, on which also appears the distribution of icebergs and field-ice and the limits of fog-belts west of the fortieth meridian.

Except over the northern and central plateau districts and the north Pacific coast region, where the mean temperatures exceeded the normal from 2° to 5°, the month was colder than the average May in all parts of the United States, the region of greatest deficiency of temperature being the upper Mississippi valley, where the means ranged from 6° to 9° below the normal.

The rainfall for May was largely deficient in the Rio Grande Valley, extreme northwest, and on the Pacific coast; it was also below the average in Florida, the lower lakes, middle slope, and middle and northern plateau districts, but the deficiencies in these latter districts were less marked than in those first named. In New England, the middle Atlantic and east Gulf states, the upper Mississippi and Missouri valleys, and northern slope there was a large excess over the average rainfall.

A destructive flood prevailed in the upper Mississippi river during the first and second decades of the month, causing extensive loss of property in the towns and cities along its banks in the states of Minnesota, Wisconsin, Iowa, Missouri, and Illinois.

In the preparation of this REVIEW the following data, received up to June 20, 1888, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at 133 Signal Service stations and 23 Canadian stations, as telegraphed to this office; 177 monthly journals and 175 monthly means from the former and 23 monthly means from the latter; 352 monthly registers from voluntary observers; 60 monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the Hydrographic Office, United States Navy, and the "New York Herald Weather Service;" monthly weather reports from the local weather services of Alabama, Arkansas, Colorado, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New England, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, and Tennessee, and the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean pressure for May, 1888, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii. The isobar of 30.00, showing the regions of greatest mean pressure for May, 1888, extends along the Atlantic coast from Florida to Nova Scotia, the station reporting the maximum mean pressure, 30.04, being Hatteras, N. C. In all other regions covered by the observations the mean pressure was below 30.00, with the exception of a single station, viz., Tatoosh Island, Wash., where the mean just reached that figure. The region of minimum mean pressure embraces the southern Rocky Mountain and plateau districts, where the pressure falls below 29.85.

The departures from the normal pressure at the various Signal Service stations are given in the table of miscellaneous meteorological data. Comparison with the normal pressure shows a deficiency in all parts of the country, with the exception of the extreme northwest, New England, and the Maritime Provinces of Canada, where there was a slight excess, generally less than .05. The deficiencies range from .05 to .10 over about one-half of the entire country, being most marked on the north Pacific coast. While the mean pressure for this month was for the most part below the normal, the preceding month was characterized by unusually high mean pressure over nearly the whole country.

The barometric means of April and May, 1888, compared, shows the latter to range .10 to .20 below the former over nearly the whole country, the decrease being most marked over the region from the Great Lakes to the Gulf of Mexico. A very slight increase is shown over the Gulf of Saint Lawrence.

BAROMETRIC RANGES.

The monthly barometric ranges at the various Signal Service stations are also given in the table of miscellaneous meteorological data. The ranges, as usual, conform to the general rule; that is, they increase with the latitude and decrease slightly, though somewhat irregularly, with increasing longitude. In the states bordering on the Atlantic the extreme ranges were .33 at Key West, Fla., and .61 at Block Island, R. I.; between the eighty-fifth and one hundredth meridians, .36 at Galveston, Tex., and 1.05 at Marquette, Mich.; eastern slope of the Rocky Mountains, .46 at Fort Davis, Tex., and 1.01 at Denver, Colo.; plateau region, .35 at Fort Grant, Ariz., and .77 at Fort Bridger, Wyo.; Pacific coast, .28 at San Diego, Cal., and .60 at Portland, Oregon. The ranges for this month over the whole country differ but slightly from the normal.

AREAS OF HIGH PRESSURE.

Five well-defined areas of high pressure were observed during the month of May, three of which approached the north Pacific coast from west to southwest, and, after being retarded while the centre of greatest pressure was near the coast line, moved to the eastward of the Rocky Mountains in a direction